Brit. J. vener. Dis. (1972) **48**, 295

Short case reports

Reiter's disease with keratoderma in a man with papulosquamous secondary syphilis

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Neither early syphilis nor Reiter's disease is uncommon in the United Kingdom but their simultaneous occurrence must indeed be rare. This paper describes three cases which illustrate certain difficulties in venereology, including the reluctance of some patients to give correct information, the relative isolation of the venereology department in the hospital community, and the transient and anonymous nature of life in large cities.

The subjects are a father aged 33, born in Eire, his cohabitee aged 22, born in England, and the male infant resulting from this union, who was 75 days old at the time of starting treatment.

Case 1

A past history was obtained of Reiter's disease 13 years previously, gonorrhoea and Reiter's disease 6 years previously, and gonorrhoea 2 years previously, all treated elsewhere. His general health was good.

Received for publication October, 1 1971

At the first attendance, he gave a history of casual sexual contact with an unknown female about 2 weeks previously, and of intercourse both before and after this incident with his regular partner. He was found to have balanoposthitis, bilateral inguinal lymphadenopathy, and a small ulcer on the fraenum. Darkground examination for *T. pallidum* was negative. He was requested to return for further darkground examination on the next day, but he defaulted and remained untraceable, having given a false address.

Serological tests showed that the Reiter protein complement-fixation, VDRL slide, and cardiolipin Wassermann reactions were positive, and a retrospective diagnosis was made of seropositive primary syphilis.

The patient came to the clinic again 48 days later, once more using a false identity. He was seen by a different doctor, and gave a history of malaise, low backache, balanitis, and a recent extensive rash (Fig. 1). He denied any past knowledge of sexually transmitted infection, but very convincingly stated that he had been treated twice before in hospitals in the north of England for exfoliative psoriasis. Examination revealed psoriasiform plaques in the scalp, a widespread erythematous papulo-squamous

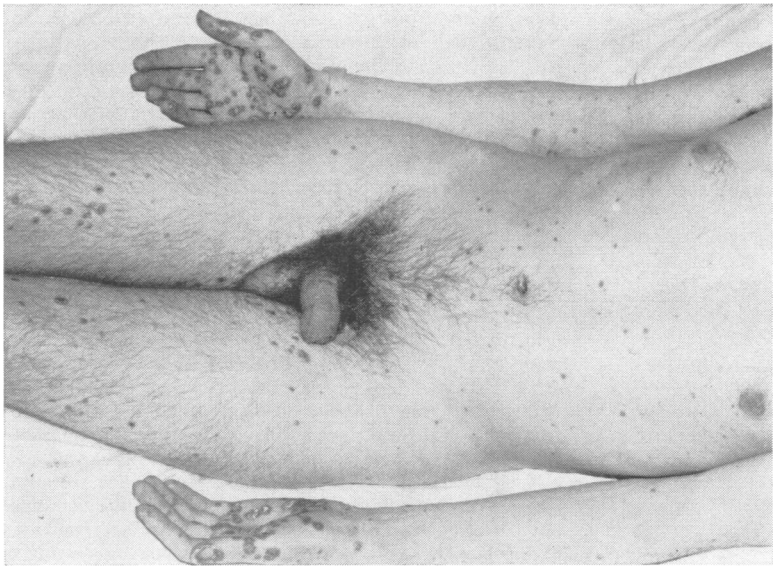

FIG. 1 *Case* 1. *Signs of secondary syphilis before treatment.*

eruption on the trunk, palms, and soles, onycholysis of the finger nails (Fig. 2), buccal ulceration, and circinate balanoposthitis. There was no lymphadenopathy and no joint swelling. Serological tests were all positive, but by the time the results were known, he had once more defaulted and despite valiant detective efforts by our Welfare Officer, Mrs. Grace Phillipson, he could not be found for treatment of his secondary syphilis.

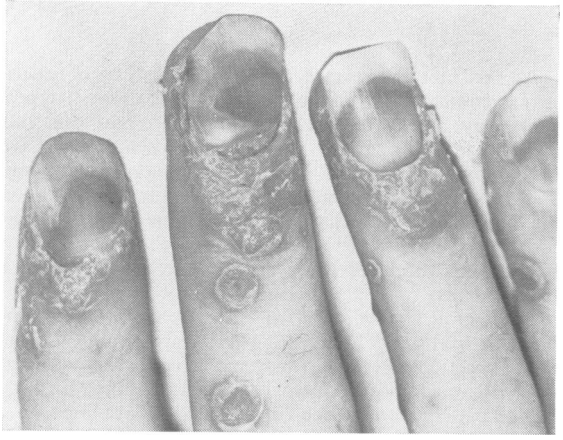

FIG. 2 *Case* 1. *Onycholysis and psoriasiform eruptions before treatment*

A chance conversation between the consultant dermatologist (Dr. O. L. S. Scott) and the author 9 days later revealed that the patient had been admitted on the previous day to a neighbouring hospital, where a tentative diagnosis of Reiter's disease had been made. Later that day a visit by the author to the second hospital confirmed that this was in fact the defaulting patient, under a third false identity.

There was a dense crusty psoriasiform eruption on the scalp together with nits of *P. capitis*. There was a bilateral symmetrical brownish-red papulo-squamous eruption on the trunk, a pustulo-squamous eruption on the palms, onycholysis, circinate balanitis, no penile ulceration, anal condylomata lata, a papulo-squamous eruption on both insteps, and on the extremities of the heels and soles (Fig. 3) a widespread coalescent hyperkeratotic papulo-squamous eruption.

In addition, there were palpable occipital lymph glands, effusions of both knees, and swellings of the ankles and right wrist. There was no urethral discharge.

Laboratory investigations

Temperature 101°F.
Reiter protein complement-fixation test positive;
VDRL slide test positive 1 in 32;
Cardiolipin Wassermann reaction positive;
FTA-ABS test positive.
Haemoglobin 10·9 g. per cent.; White blood count 11,500 per cu. mm. with normal differential.
Erythrocyte sedimentation rate 136 mm./1st hr.
Total protein 8 mg. per cent., albumin 3·5 mg. per cent., globulin 4·5 mg. per cent.

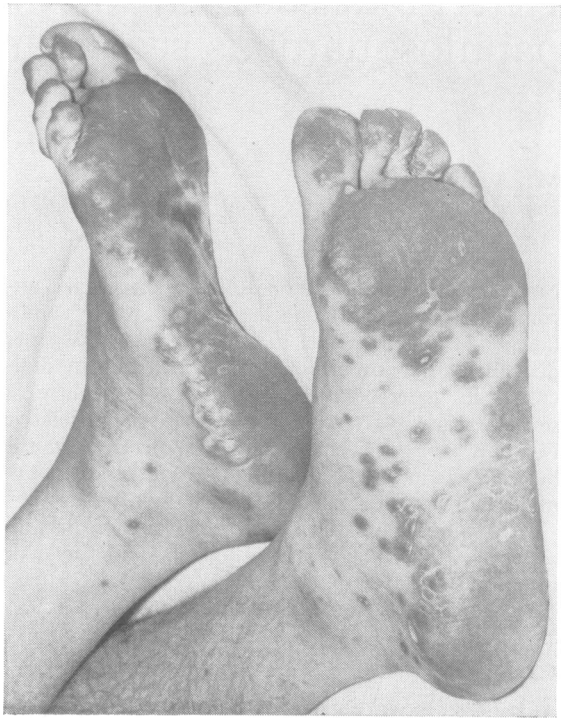

FIG. 3 *Case* 1. *The feet in secondary syphilis complicated by keratoderma blennorrhagica*

X-ray examination showed erosive changes in both sacroiliac joints.
40 ml. clear fluid was aspirated from the right knee joint and 50 ml. from the left.
Liver biopsy showed normal histology.
Skin biopsy from the right foot showed acanthosis and hyperkeratosis with parakeratosis. In the upper layers of the epidermis there were foci of polymorphonuclear infiltration. There was slight narrowing of the rete ridges and oedema of the papillae, all compatible with keratoderma blennorrhagica or alternatively psoriasis.
A final diagnosis was made of secondary syphilis, *Pediculosis capitis*, and Reiter's disease complicated by keratoderma blennorrhagica.

Treatment

Thus 57 days after the patient's first attendance, we were able to start treatment which could have been initiated on the second day, if he had not defaulted or given false information. 13·5 m.u. intramuscular procaine penicillin were given over 15 days. The nits in the scalp cleared after a 1 per cent. gamma benzene hexachloride shampoo. Analgesics, rest in bed, splinting, and physiotherapy alleviated the joint symptoms. The papulo-squamous eruption in the scalp and the keratoderma blennorrhagica of the hands and feet responded to Fluclorolone acetonide 0·025 per cent. w/v (Topilar, Syntex) ointment under polythene occlusive dressings, and the circinate balanitis to 1 per cent. hydrocortisone lotion. It was interesting to

note that, as the eruption of secondary syphilis on the hands cleared with penicillin, keratoderma blennorrhagica became more widespread there (Fig. 4).

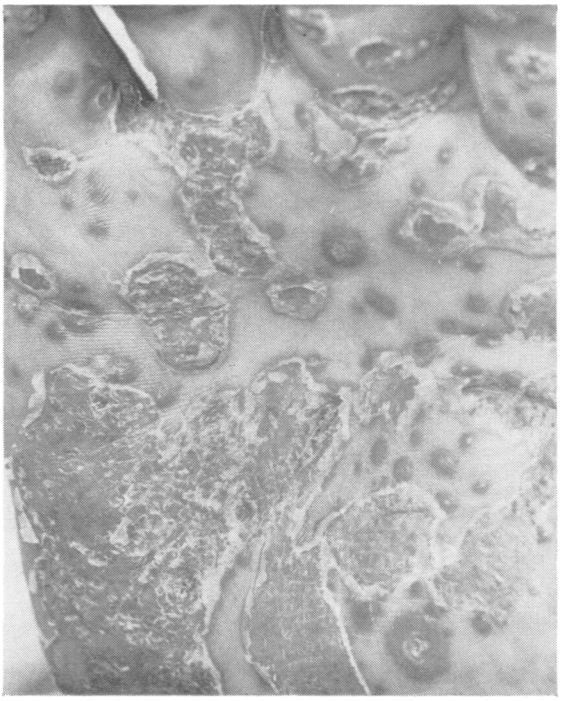

FIG. 4 *Case* 1. *Right hand* 1 *week after treatment with procaine penicillin, showing exacerbation of keratoderma blennorrhagica*

The changes in the epidermis are shown in Fig. 5 (overleaf).

Result

The fever had abated by the third day after admission, and the patient was discharged from hospital 113 days after his initial presentation. The erythrocyte sedimentation rate at that time was 61 mm./1st hr.

Case 2

As soon as Case 1 was found in the second hospital, his consort was visited by our Welfare Officer and brought for examination.

There was no previous history of venereal disease and she admitted sexual contact only with Case 1. She had noted a slight rash on her abdomen which she attributed to a recent pregnancy, but otherwise she felt well. She had given birth to a male infant 24 days previously.

Examination

She was found to have a faint erythematous symmetrical maculopapular eruption on the trunk, palms, and soles, generalized lymphadenopathy, and injected fauces. The results of the serological tests for syphilis were RPCF test positive, VDRL slide test positive 1 in 8, CWR positive, and FTA (ABS) test positive.

Diagnosis

Secondary syphilis.

Treatment

She was given 13·5 m.u. intramuscular procaine penicillin over 15 days.

Case 3

The baby was found being fostered by nursing sisters of a nearby religious community. He was first examined 59 days after the father's first presentation and 26 days after his birth, which had been normal and at full term.

Examination

He was a healthy male infant with a perianal napkin eruption which was negative for *T. pallidum* by darkfield examination. He was seen three more times in the next 38 days, during which no abnormality was found. The infant thrived, and the VDRL, CWR, RPCF, and FTA (ABS) tests remained negative.

At the fourth examination, when the child was 64 days old, a sanguinous catarrhal discharge from the left nostril was seen. This was negative for *T. pallidum*, but blood tests gave the following results: RPCFT positive, VDRL slide test positive, CWR positive, FTA (ABS) IgG positive. These were repeated at 70 days when the results were RPCFT positive, VDRL slide test positive 1 in 64, CWR positive, FTA (ABS) IgG positive Dil. 1/405, IgM positive Dil. 1/45.

X-rays showed no evidence of any bony syphilitic lesion throughout the skeleton.

Treatment

240,000 units procaine penicillin were given intramuscularly daily for 10 days.

Result

The child recovered, losing his snuffles and nasal discharge and gaining weight.

Discussion

These related cases emphasize need for truthfulness and the importance of prompt diagnosis, treatment, and contact-tracing. A case of secondary syphilis complicating Reiter's disease might have been avoided, if correct details had been given by the father at his first visit. It is difficult to see how the infant could escape being infected, but his relatively minor symptoms show how congenital syphilis may have few presenting signs. It is well known that a

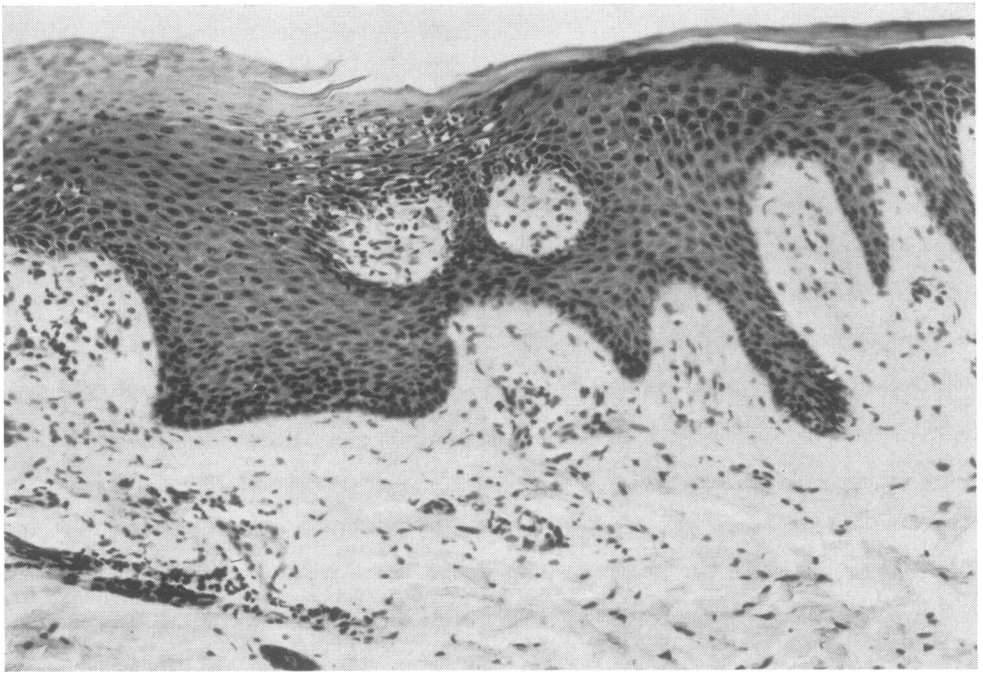

FIG. 5 *Case* 1. *Skin biopsy of dorsum of right foot*

mother who acquires syphilis late in pregnancy may give birth to an infant with negative serological tests for syphilis (Konstant, 1964), and late acquisition of disease by the mother may also explain the not infrequent occurrence of clinically manifest syphilis developing 1 or 2 months after birth in an apparently healthy infant (Alford, Polt, Cassady, Straumfjord, and Remington, 1969). The importance of carrying out standard serological tests for syphilis before an infant is offered for adoption remains, despite pressure to have this precaution rescinded (Catterall, 1970).

Secondary syphilis does not usually present a difficult differential diagnosis from Reiter's disease. However, Harkness (1950) described a case diagnosed as Reiter's disease in which a non-gonococcal urethritis due to meatal chancre was associated with suffused conjunctivae, swelling of both knee joints, and a generalized psoriasiform syphilide.

A rupioid psoriasiform eruption occurring in secondary syphilis can present problems of diagnosis, especially when it is considered that keratoderma blennorrhagica and psoriasis may be morphologically and histologically indistinguishable (Baker, 1971). In the case of the father, the pustulo-squamous nature of the lesions of the palms and the onycholysis initially suggested psoriasis.

Samman (1965) stated that, although onycholysis was not always recognized as a feature of psoriasis, it occurred almost as often as pitting. The changes in our case further strengthen the similarity between psoriasis and keratoderma blennorrhagica. Samman stated that nail changes in syphilis were becoming very rare in England, but various dystrophic nail changes (syphilitic onychia) may occur in secondary syphilis (Fournier, 1906).

Summary

A case is described of untreated primary syphilis leading to papulo-squamous secondary syphilis and complicated by Reiter's disease with keratoderma. It illustrates the need for patients attending special treatment centres to give their true identity, and the need for prompt diagnosis, treatment and contact-tracing.

Secondary syphilis in the patient's consort, and congenital syphilis in their infant, are described.

The author would like to thank Dr. J. L. Fluker and Dr. J. D. Oriel for permission to report the cases in their care, and Dr. A. L. Wyman (consultant physician) and Dr. O. L. S. Scott (consultant physician for diseases of the skin) for permission to report their case in Fulham Hospital.

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Maladie de Reiter avec kératodermie chez un homme présentant une syphilis secondaire papulo-squameuse

SOMMAIRE

On décrit un cas de syphilis primaire non traitée ayant abouti à une syphilis secondaire papulo-squameuse et s'étant compliquée d'une maladie de Reiter avec kératodermie. Ceci illustre la nécessité d'obtenir la véritable identité des malades fréquentant les centres de traitement spécialisés et la nécessité du diagnostic rapide, du traitement, et de la recherche des contacts.

On décrit la syphilis secondaire de la femme du malade et la syphilis congénitale de leur enfant.